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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/718,364 | 11/24/2000 | Yasuo Suzuki | 35 . C14943 | 3076 |

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EXAMINER

TRAN, HUAN HUU

ART UNIT PAPER NUMBER

2861

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/718,364

Applicant(s)

SUZUKI ET AL.

Examiner

Huan H. Tran

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pw

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 5-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1, 2, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazuo in view of Iwase (US Patent 6034982 cited in the IDS filed on 02/23/01).

Kazuo discloses a semiconductor laser array comprising:
chip (9) having a plurality of luminous spots; and
a silicon mount (1) for mounting said chip by means of solder (7);
wherein said chip is soldered to said mount while said chip projects from a corresponding end facet of said mount with a side of said chip having said plurality of luminous spots projecting away from the corresponding end facet of said mount.

As to claims 1 and 2, Kazuo discloses everything except that it does not explicitly teach that the semiconductor lasers of the semiconductor laser array are buried heterojunction type lasers bonded to a substrate in a junction down fashion, and that the laser are driven independently (claim 5).

Iwase teaches a semiconductor laser array wherein the lasers are buried heterojunction type lasers, wherein the lasers are bonded to a substrate in a junction down fashion, and wherein the lasers are driven independently.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Iwase into that of Kazuo in order to improve the heat emitting efficiency of the semiconductor lasers.

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2. Claims 6, 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-48557 cited in the IDS filed on 02/23/01 in view of Kazuo and Iwase.

JP 10-48557 discloses an optical scanner comprising:

a light source (1);

a scanning unit (2);

a focusing lens (4) made of plastic (note the description of JP 10-48557 given in the specification of the present application on page 4).

JP 10-48557 does not show the particular of the light source as recited in the claims.

Kazuo modified by Iwase teaches the claimed light source as discussed earlier.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the semiconductor laser array taught by Kazuo as the light source in the optical scanner of JP 10-48557 for higher operating speed and resolution. With the particular arrangement of the lasers with respect to the submount, the areas near the luminous spots are substantially not influenced by the soldering to reduce the residual stress that appears after the soldering.

Response to Arguments

3. Applicant's arguments filed on 02/23/04 have been fully considered but they are not persuasive. Argument was made that the applied art is not seen to disclose or to suggest the features of Claims 1 and 6, and in particular is not seen to disclose or to suggest at least the feature of soldering a chip to the mount in a fashion of junction down while the chip projects from a corresponding end facet of the mount with a side of the chip having a

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plurality of luminous spots projecting away from the corresponding end facet of said mount.

In response to applicant's arguments against the references individually, it should be noted that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huan H. Tran whose telephone number is (571) 272-2261. The examiner can normally be reached on M-F with Monday off, from 7:30am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The

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fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Huan H. Tran
Primary Examiner
Art Unit 2861

hht
03/19/2004